

**Sheldon & Associates, Inc.**  
5031 University Way NE  
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DATE: December 5, 2005  
TO: Jon Jainga, Project Manager  
RE: Haul Road Remediation and Effects on Frog Pond

In response to recent inquiries from members of the PAT, here is a quick explanation of what work was completed on the Haul Road near Frog Pond at Magnuson. I hope this information will suffice to address concerns.

Per the City's legal agreement with the Corps of Engineers, the side slopes of the haul road were pulled back in the areas that the Corps of Engineers letter noted where wetland fill had occurred. The margins of the road were then hydroseeded and hay mulched to stabilize them for over this winter. The intention of the work was to eliminate the wetland fill the Corps had cited and to stabilize freshly moved soils for the winter season. This is what the Corps agreed that the City would perform for remediation.

Work near Frog Pond included replacing silt fencing between the haul road and the southern pond margin to eliminate silt from the road entering the pond. The previous silt fence near the pond had failed and water exiting the pond was sheet flowing across the haul road, causing erosion and sedimentation downslope of the haul road.

Water has always entered Frog Pond from several sources: direct precipitation, sheet flow from the surrounding uplands, and from over-flow of the ditch to the east, when it's in a high-water condition. Water has always exited Frog Pond by sheet flowing over the road bed which forms its southern edge (the "haul road"). Prior to the roadbed being used as the haul road for the Phase I Sports Field, the road surface and edges were stable and partially vegetated, so little if any erosion occurred by that overflow. Flows in the ditch are generated, in part, from drainage from the Sports Meadow: they were prior to the new work and they are currently. The ditch has not been reworked to my knowledge for Phase I work, and it continues to flow in the same alignment as previously. The ditch overflows into Frog Pond in high water conditions.

The new outlet was placed as a culvert under the haul road at the same elevation roughly as the water in Frog Pond has been in an effort to not lower the pond elevation. The purpose of the outlet is to preclude the sheet flow across the exposed soils of the haul road, thus reducing sedimentation downslope. Increases in the elevation of water surface in Frog Pond may be caused by the presence of the silt fencing used to protect the pond from sediment from the haul road. The increase in winter water levels within the pond will not adversely effect the wetland vegetation nor the ability or success of breeding amphibians or invertebrates in the pond.

A brief letter report of the completion of the remediation, including photographs, is being prepared for submittal to the Corps on behalf of the City.

From the desk of...

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Principal

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